

Amendments to Claims:

Claims 1, 4, 5, 8-14, 16, 29-39, 42-47, and 49-55 are pending in this application. Claims 1, 5, 14, 16, 29, 38, and 49 are amended herein. This listing of claims replaces all prior listings or versions of the claims.

1. (Currently Amended) A stable liquid pharmaceutical botulinum toxin formulation for therapeutic use in humans, comprising
a pharmaceutically acceptable buffered saline, ~~wherein the~~ **comprising a** buffering component **that** is **[[a]]** succinate buffer, in which said buffered saline provides a buffered pH range to the formulation between pH 5 and pH 6,
a therapeutic concentration of a purified botulinum toxin suitable for use in humans, and serum albumin;
wherein the formulation is stable as a liquid when stored for at least one year at a temperature of about 5 degrees centigrade or for at least 6 months at a temperature between about 10 and 30 degrees centigrade.
- 2-3. (Cancelled)
4. (Previously Presented) The formulation of claim 1, wherein said buffered pH is between about pH 5.4 and pH 5.8.
5. (Currently Amended) The formulation of claim 1, wherein said ~~toxin~~ formulation is stable in liquid form for at least two years at a temperature of about 5 degrees centigrade.
- 6.-7. (Cancelled)
8. (Previously Presented) The formulation of claim 1, wherein said botulinum toxin is of a botulinum toxin serotype selected from the group consisting of serotypes A, B, C₁, C₂, D, E, F and G.

9. (Previously Presented) The formulation of claim 8, wherein said botulinum toxin is botulinum toxin Type B present at said therapeutic concentration in the range of 100-20,000 U/ml \pm 10%.
10. (Previously Presented) The formulation of claim 9, wherein said botulinum toxin Type B is present in a high molecular weight complex of 700 kilodaltons (kD) \pm 10%.
11. (Previously Presented) The formulation of claim 9, wherein said botulinum toxin Type B is present at said therapeutic concentration between 1000-5000 U/ml.
12. (Previously Presented) The formulation of claim 8, wherein said botulinum toxin is botulinum toxin Type A, and is present in the stable liquid pharmaceutical formulation at said therapeutic concentration in the range of between 20-2000 U/ml.
13. (Previously Presented) The formulation of claim 12, wherein said botulinum toxin Type A is present in the stable liquid pharmaceutical formulation at said therapeutic concentration in the range of between 100-1000 U/ml.
14. (Currently Amended) The formulation of claim 1, wherein the stable liquid **pharmaceutical** formulation comprises 100 mM sodium chloride; 10 mM succinate buffer at a buffered pH of 5.6; 0.5 mg/mL human serum albumin; and botulinum type B present at a concentration of 5,000 \pm 1000 U/ml.
15. (Cancelled)
16. (Currently Amended) A stable liquid pharmaceutical formulation for therapeutic use in humans comprising
0.5 mg/ml human serum albumin,
botulinum toxin type B present at a concentration of 5,000 \pm 1000 U/ml, and

a pharmaceutically acceptable buffered saline which provides a buffered pH ~~range~~ to the formulation of pH 5.6,

wherein said botulinum toxin is stable in said formulation for at least about 6 months at a temperature between 10 and 30 degrees centigrade \pm 10%, and

wherein said buffered saline comprises 100 mM sodium chloride and 10 mM succinate buffer.

17.-28. (Cancelled)

29. (Currently Amended) A method of treating a patient in need of inhibition of cholinergic input to a selected muscle, muscle group, gland or organ, comprising administering to the selected muscle, muscle group, gland or organ of the patient a pharmaceutically effective dose of ~~a-stabilized~~ the stable liquid pharmaceutical botulinum toxin formulation of claims 1 or 16.

30. (Original) The method of claim 29, wherein said patient is suffering from a disorder selected from the group consisting of spasticity, blepharospasm, strabismus, hemifacial spasm, dystonia, otitis media, spastic colitis, animus, urinary detrusor-sphincter dyssynergia, jaw-clenching, and curvature of the spine.

31. (Original) The method of claim 30, wherein said patient is suffering from spasticity due to one or more of the group consisting of stroke, spinal cord injury, closed head trauma, cerebral palsy, multiple sclerosis, and Parkinson's disease.

32. (Original) The method of claim 30, wherein said patient is suffering from a dystonia selected from the group consisting of spasmodic torticollis (cervical dystonia), spasmodic dysphonia, limb dystonia, laryngeal dystonia, and oromandibular (Meige's) dystonia.

33. (Original) The method of claim 29, wherein said selected muscle or muscle group produces a wrinkle or a furrowed brow.

34. (Original) The method of claim 29, wherein said muscle is a perineal muscle and wherein said patient is in the process of giving birth to a child.
35. (Original) The method of claim 29, wherein said patient is suffering from a condition selected from the group consisting of myofascial pain, headache associated with migraine, vascular disturbances, neuralgia, neuropathy, arthritis pain, back pain, hyperhydrosis, rhinorrhea, asthma, excessive salivation, and excessive stomach acid secretion.
36. (Original) The method of claim 29, wherein said formulation is stable as a liquid for at least one year at a temperature of about 5 ± 3 degrees centigrade.
37. (Original) The method of claim 29, wherein said formulation is stable as a liquid for at least one year at a temperature of about 4 ± 2 degrees centigrade.
38. (Currently Amended) The method of claim 29, wherein said formulation is stable as a liquid for at least six ~~month~~ months at a temperature of about 25 degrees centigrade.
39. (Previously Presented) The method of a claim 29, wherein said buffered pH range is between about pH 5.4 and pH 5.8.
- 40.-41. (Cancelled)
42. (Original) The method of claim 29, wherein said botulinum toxin is a botulinum toxin serotype selected from the group consisting of serotypes A, B, C₁, C₂, D, E, F and G.
43. (Original) The method of claim 42, wherein said botulinum toxin is botulinum toxin Type B present at a concentration in the range of about 100-20,000 U/ml.
44. (Original) The method of claim 43, wherein said botulinum toxin Type B is present in a high molecular weight complex of about 700 kD.

45. (Original) The method of claim 43, wherein said botulinum toxin Type B is present at a concentration of about 1000-5000 U/ml.
46. (Original) The method of claim 42, wherein said botulinum toxin is botulinum toxin Type A, present at a concentration in the range of about 20-2000 U/ml.
47. (Original) The method of claim 46, wherein said botulinum toxin Type A is present at a concentration in the range of about 100-1000 U/ml.
48. (Cancelled)
49. (Currently Amended) The method of claim ~~[[48]]~~ 29, wherein said serum albumin is recombinant human serum albumin.
50. (Original) The method of claim 29, wherein said patient is refractory to botulinum toxin Type A and said botulinum toxin in said formulation is selected from the group consisting of botulinum serotypes B, C₁, C₂, D, E, F and G.
51. (Original) The method of claim 50, wherein said botulinum toxin in said formulation is botulinum toxin Type B.
52. (Original) The method of claim 29, wherein said patient is refractory to botulinum toxin Type B and said botulinum toxin in said formulation is selected from the group consisting of botulinum serotypes A, C₁, C₂, D, E, F and G.
53. (Original) The method of claim 52, wherein said botulinum toxin in said formulation is botulinum toxin Type A.

54. (Previously Presented) The formulation of claim 1, wherein said formulation is stable as a liquid for at least one year at a temperature of about 5 ± 3 degrees centigrade.

55. (Previously Presented) The formulation of claim 1, wherein said formulation is stable as a liquid for at least one year at a temperature of about 4 ± 2 degrees centigrade.

Clean Listing of Claims:

As requested by Examiner Hurt, provided below is a clean listing of the claims reflecting the amendments to claims 1, 5, 14, 16, 29, 38, and 49 shown above.

1. (Currently Amended) A stable liquid pharmaceutical botulinum toxin formulation for therapeutic use in humans, comprising
a pharmaceutically acceptable buffered saline comprising a buffering component that is succinate buffer, in which said buffered saline provides a buffered pH range to the formulation between pH 5 and pH 6,
a therapeutic concentration of a purified botulinum toxin suitable for use in humans, and serum albumin;
wherein the formulation is stable as a liquid when stored for at least one year at a temperature of about 5 degrees centigrade or for at least 6 months at a temperature between about 10 and 30 degrees centigrade.
- 2-3. (Cancelled)
4. (Previously Presented) The formulation of claim 1, wherein said buffered pH is between about pH 5.4 and pH 5.8.
5. (Currently Amended) The formulation of claim 1, wherein said formulation is stable in liquid form for at least two years at a temperature of about 5 degrees centigrade.
- 6.-7. (Cancelled)
8. (Previously Presented) The formulation of claim 1, wherein said botulinum toxin is of a botulinum toxin serotype selected from the group consisting of serotypes A, B, C₁, C₂, D, E, F and G.

9. (Previously Presented) The formulation of claim 8, wherein said botulinum toxin is botulinum toxin Type B present at said therapeutic concentration in the range of 100-20,000 U/ml \pm 10%.
10. (Previously Presented) The formulation of claim 9, wherein said botulinum toxin Type B is present in a high molecular weight complex of 700 kilodaltons (kD) \pm 10%.
11. (Previously Presented) The formulation of claim 9, wherein said botulinum toxin Type B is present at said therapeutic concentration between 1000-5000 U/ml.
12. (Previously Presented) The formulation of claim 8, wherein said botulinum toxin is botulinum toxin Type A, and is present in the stable liquid pharmaceutical formulation at said therapeutic concentration in the range of between 20-2000 U/ml.
13. (Previously Presented) The formulation of claim 12, wherein said botulinum toxin Type A is present in the stable liquid pharmaceutical formulation at said therapeutic concentration in the range of between 100-1000 U/ml.
14. (Currently Amended) The formulation of claim 1, wherein the stable liquid pharmaceutical formulation comprises 100 mM sodium chloride; 10 mM succinate buffer at a buffered pH of 5.6; 0.5 mg/mL human serum albumin; and botulinum type B present at a concentration of 5,000 \pm 1000 U/ml.
15. (Cancelled)
16. (Currently Amended) A stable liquid pharmaceutical formulation for therapeutic use in humans comprising
0.5 mg/ml human serum albumin,
botulinum toxin type B present at a concentration of 5,000 \pm 1000 U/ml, and

a pharmaceutically acceptable buffered saline which provides a buffered pH to the formulation of pH 5.6,

wherein said botulinum toxin is stable in said formulation for at least about 6 months at a temperature between 10 and 30 degrees centigrade \pm 10%, and

wherein said buffered saline comprises 100 mM sodium chloride and 10 mM succinate buffer.

17.-28. (Cancelled)

29. (Currently Amended) A method of treating a patient in need of inhibition of cholinergic input to a selected muscle, muscle group, gland or organ, comprising administering to the selected muscle, muscle group, gland or organ of the patient a pharmaceutically effective dose of the stable liquid pharmaceutical botulinum toxin formulation of claims 1 or 16.

30. (Original) The method of claim 29, wherein said patient is suffering from a disorder selected from the group consisting of spasticity, blepharospasm, strabismus, hemifacial spasm, dystonia, otitis media, spastic colitis, animus, urinary detrusor-sphincter dyssynergia, jaw-clenching, and curvature of the spine.

31. (Original) The method of claim 30, wherein said patient is suffering from spasticity due to one or more of the group consisting of stroke, spinal cord injury, closed head trauma, cerebral palsy, multiple sclerosis, and Parkinson's disease.

32. (Original) The method of claim 30, wherein said patient is suffering from a dystonia selected from the group consisting of spasmodic torticollis (cervical dystonia), spasmodic dysphonia, limb dystonia, laryngeal dystonia, and oromandibular (Meige's) dystonia.

33. (Original) The method of claim 29, wherein said selected muscle or muscle group produces a wrinkle or a furrowed brow.

34. (Original) The method of claim 29, wherein said muscle is a perineal muscle and wherein said patient is in the process of giving birth to a child.
35. (Original) The method of claim 29, wherein said patient is suffering from a condition selected from the group consisting of myofascial pain, headache associated with migraine, vascular disturbances, neuralgia, neuropathy, arthritis pain, back pain, hyperhydrosis, rhinorrhea, asthma, excessive salivation, and excessive stomach acid secretion.
36. (Original) The method of claim 29, wherein said formulation is stable as a liquid for at least one year at a temperature of about 5 ± 3 degrees centigrade.
37. (Original) The method of claim 29, wherein said formulation is stable as a liquid for at least one year at a temperature of about 4 ± 2 degrees centigrade.
38. (Currently Amended) The method of claim 29, wherein said formulation is stable as a liquid for at least six months at a temperature of about 25 degrees centigrade.
39. (Previously Presented) The method of a claim 29, wherein said buffered pH range is between about pH 5.4 and pH 5.8.
- 40.-41. (Cancelled)
42. (Original) The method of claim 29, wherein said botulinum toxin is a botulinum toxin serotype selected from the group consisting of serotypes A, B, C₁, C₂, D, E, F and G.
43. (Original) The method of claim 42, wherein said botulinum toxin is botulinum toxin Type B present at a concentration in the range of about 100-20,000 U/ml.
44. (Original) The method of claim 43, wherein said botulinum toxin Type B is present in a high molecular weight complex of about 700 kD.

45. (Original) The method of claim 43, wherein said botulinum toxin Type B is present at a concentration of about 1000-5000 U/ml.
46. (Original) The method of claim 42, wherein said botulinum toxin is botulinum toxin Type A, present at a concentration in the range of about 20-2000 U/ml.
47. (Original) The method of claim 46, wherein said botulinum toxin Type A is present at a concentration in the range of about 100-1000 U/ml.
48. (Cancelled)
49. (Currently Amended) The method of claim 29, wherein said serum albumin is recombinant human serum albumin.
50. (Original) The method of claim 29, wherein said patient is refractory to botulinum toxin Type A and said botulinum toxin in said formulation is selected from the group consisting of botulinum serotypes B, C₁, C₂, D, E, F and G.
51. (Original) The method of claim 50, wherein said botulinum toxin in said formulation is botulinum toxin Type B.
52. (Original) The method of claim 29, wherein said patient is refractory to botulinum toxin Type B and said botulinum toxin in said formulation is selected from the group consisting of botulinum serotypes A, C₁, C₂, D, E, F and G.
53. (Original) The method of claim 52, wherein said botulinum toxin in said formulation is botulinum toxin Type A.

54. (Previously Presented) The formulation of claim 1, wherein said formulation is stable as a liquid for at least one year at a temperature of about 5 ± 3 degrees centigrade.

55. (Previously Presented) The formulation of claim 1, wherein said formulation is stable as a liquid for at least one year at a temperature of about 4 ± 2 degrees centigrade.